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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/424,487	02/29/2000	YEN CHOO	PM264975	8044

20350 7590 09/15/2003

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EXAMINER

ROBINSON, HOPE A

ART UNIT PAPER NUMBER

1653

DATE MAILED: 09/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/424,487

Applicant(s)

CHOO ET AL.

Examiner

Hope A. Robinson

Art Unit

1653

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 August 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☒ Applicant's reply has overcome the following rejection(s): 102(b) over claim 3 and the dependent claims.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see the attached sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: 8, 12Claim(s) rejected: 1-7, 9-11, 13-23 and 32.Claim(s) withdrawn from consideration: 25-30

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's response to the Final Office Action mailed June 13, 2003 on August 21, 2003 is acknowledged.

2. Applicant's arguments filed June 13, 2003 have been fully considered but are not persuasive.

The rejections under 35 U.S.C. 102(b) has been maintained.

The rejection under 35 U.S.C. 103(a) has been maintained.

3. Claims 3 and 14 have been amended. Claims 1-30 and 32 are pending. Claims 1-24 and 32 are under examination.

4. Claim 30 is objected to because the claim depends from a non-elected claim.

5. Claims 1-2, 13, 15-16, 18-19, 21-23 and 30 remain rejected under 35 U.S.C. 102(b) as being anticipated by Choo et al. (WO 96/06166, February 29, 1996).

Upon further consideration of the application the claims as written do not reflect the differences asserted by applicant in the response for the claims listed above. The rules of the present invention are the same as taught by the reference of record, Choo et al. Where the instant application teaches a quadruplet with bases 1-4, the triplet code of the reference is the same as bases 1-3 of the instant invention and the fourth base of the instant application corresponds with the first base of the reference in the next triplet code. Thus, bases 1 2 3 4 of the quadruplet code is the same as bases 1 2 3 1 of the reference, which demonstrates the overlap claimed.

To reiterate, Choo et al. teaches nucleic acid binding motifs for  $\alpha$ -helical zinc finger defined as triplets, and the present application specifies overlapping quadruplets as binding

motifs, such that, when read 3' to 5' on the strand of the nucleic acid, base 4 of the first quadruplet is base 1 of the second and so on. However, base 4 of the quadruplet is equivalent to the 5' base of the zinc finger-binding triplet defined by Choo et al. (see page 3, line 23 to page 4 line 5 of the reference). The rules, which relate to amino acids of a  $\alpha$ -helix to corresponding bases in the bound DNA triplet or quadruplet are taught by Choo et al. Choo et al. teaches a recognition code for amino acid base contacts in interactions of an  $\alpha$ -helical zinc finger nucleic acid binding motif with DNA triplets; and that position +2 is able to specify the base directly 3' of the cognate triplet and thus, works in conjunction with position +6 of the preceding finger. This renders the claimed invention as anticipated (see Table 2, page 35, lines 9-28 and page 4 lines 2-5). Choo et al. also teach that if base 4 (which is equivalent to 5' base in Choo et al.) is G then position +6 in the  $\alpha$ -helix is Arg; or position +6 is Ser or Thr and position ++2 is Asp and also if base 4 is T, then position +6 in the  $\alpha$ -helix is Ser or Thr and position ++2 is Asp. Therefore, the rules recited in claims (see for example claim 2 of the present application) are taught by Choo et al. Additionally, Choo teaches that if base 3 (which is equivalent to the middle base of the Choo et al. reference) is G, then position +3 in the  $\alpha$ -helix is His, if base 3 is A, then position +3 is A, then position +3 in the  $\alpha$ -helix is Asn and thus, the rules recited in claim 3 item (e)-(l) of the present application are anticipated (see Table 2 and the previous Office Action (Paper No. 22) for more detail). Therefore, the rejections of record remains.

Applicant's response encompasses Appendix A and B to diagram the claim in comparison to the disclosure of the reference which has been considered. It is noted that claim 3 item k differs from the disclosure of Choo et al. However, the design of the protein has no limiting scope on the protein, consequently, is taught by the reference, hence the rejections under 35 U.S.C. 103 remains.

6. Claims 1-7, 9-11, 13-23 and 32 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Choo et al. (WO 96/06166, February 29, 1996) as applied to claims 1, 3 and 13 above in view of Krizek et al. (J. Am. Chem. Soc., vol. 113, no. 12, page 4518-4523, 1991).


The response did not address this rejection. On page 5 of the response applicant merely states that "the present claims are neither anticipated nor rendered obvious by Choo et al. either alone or in combination with Krizek". However, as stated above the Choo et al. reference anticipates the claimed invention, thus, this rejection also remains.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hope Robinson whose telephone number is (703) 308-6231. The examiner can normally be reached on Monday and Wednesday-Friday from 9.00 am to 5.30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S.F. Low, Ph.D., can be reached at (703) 308-2923.

Any inquiries of a general nature relating to this application should be directed to the Group Receptionist whose telephone number is (703) 308-0196.

Papers related to this application may be submitted by facsimile transmission. The official fax phone number for Technology Center 1600 is (703) 308-4242. Please affix the examiner's name on a cover sheet attached to your communication should you choose to fax your response. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG (November 15, 1989).

Hope Robinson, MS 

Patent Examiner

  
CHRISTOPHER S. F. LOW  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600